Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An apparatus~~Apparatus~~ for 3D shape measurement, comprising:

~~(A)~~ a laser projecting device ~~(1-1), said device consists of~~including a line-laser projector~~(1-1a)~~ and LEDs~~(1-1b)~~ attached to the line-laser projector as markers for estimating the position and orientation of the laser projecting device;

~~(B)~~ an image capturing device~~(1-2)~~ for capturing the laser projecting device and a target object; and

~~(C)~~ a computer~~(1-3)~~ for detecting a projected line-laser light and LEDs from a captured image and processing the image to compute a 3D shape measurement.

2. (Currently Amended) The apparatus for 3D shape measurement defined ~~as~~in claim 1, ~~being~~ further ~~provided with~~comprising a display device~~(2-4)~~ for displaying the 3D shape captured by the apparatus.

3. (Currently Amended) A method for 3D measurement using the apparatus of claim 1, the method comprising ~~the steps of~~:

~~(A)~~ projecting a line-laser to an object ~~by using the apparatus defined as claim 1(1-1)~~, the apparatus having LEDs attached to the line-laser projector for estimating the position and orientation of the laser projecting device;

~~(B)~~ capturing ~~the~~ projected line-laser light ~~(1-5)~~ and the LEDs at the same time using ~~on the apparatus defined as claim 1 by~~the image capturing device~~(1-2) at the same time~~; and

~~(C)~~ calculating, using the computer, ~~the~~a 3D shape of the object from the captured image using a triangulation method ~~by computer(1-3)~~.

4. (Currently Amended) A method and a system for displaying information, comprising:

~~(A)~~ means for processing the steps defined ~~as~~ in claim 3 in real-time; and

~~(B)~~ means for displaying the 3D shape acquired by the previously defined steps on a display device~~(2-5)~~.

5. (Currently Amended) A method for improving 3D shape ~~of~~using a triangulation method, the method comprising ~~the steps of~~:

~~(A)~~ selecting 3D points precisely measured by other methods or ~~accurate~~ 3D points with high accuracy from the 3D shape acquired by the method ~~defined as~~of claim 3 as known 3D points; ~~and~~

calculating a difference between the 3D depth value of a known 3D point and the 3D depth value estimated by the method of claim 3 as an error function; and

~~(B)~~ correcting ~~3D shapes by using the selected accurate 3D points~~the position and orientation of the laser projecting device by minimizing the error function.